As the global population continues to grow and individuals now live to extreme old age, researchers are striving to gain a better understanding of the impact of increased life expectancy on healthcare resources, availability and therapeutics in order to cope with the rising demand for medical attention.

According to UN projections, in about five years’ time, the global number of people aged 65 and above will outnumber children under the age of five – growing from an estimated 524 million in 2010 to almost 1.5 billion in 2050. In response to the growth of older populations, governments worldwide are aiming to develop effective data systems, improve research capacities and gain insight into the relationship between age and disease; investigating factors such as health, economic status, family and general wellbeing. At present, countries at different stages of economic development with differing resources at their disposal are trying to design the most cost-effective research strategies to find cures and develop therapeutics for age-related diseases including Alzheimer’s disease and dementia, heart disease, stroke, diabetes and cancer.

Advancements in public healthcare techniques and technologies in the 20th Century contributed to an unprecedented 30-year increase in average life expectancy in the US. This was due, in large part, to the development of treatments for diseases such as TB, diarrhoea, enteritis and syphilis, which are no longer considered life-threatening. Despite the progress of medicine, many diseases have continued to prove challenging. At present, heart disease, cancer, chronic diseases, influenza and pneumonia pose the greatest risks to ageing populations, despite the improvements in available treatments.
In 2011, approximately 5 million Canadians were aged 65 years or older – a figure expected to double in the next 25 years to 10.4 million.

The cost of providing healthcare for an individual over the age of 65 is three to five times more expensive than for someone younger than 65.

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By 2050, the number of Americans aged 65 or older will be roughly 89 million – about 72 million people – will be elderly in 2030.

By 2050, the number of over 65s worldwide will nearly triple to 1.5 billion – equalling 16% of the world’s population.

Approximately 524 million people were aged 65 or older in 2010 – representing 8% of the global population.

Chronic diseases represent 95% of healthcare costs for older Americans.

In 2011, the Million Hearts: Prevention at Work campaign was co-founded by the US Department of Health and Human Services (HHS), the Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC). The objective of this initiative is to prevent 1 million heart attacks and strokes among Americans within the next five years by increasing risk factor awareness, launching educational programmes and prevention incentives, and building local partnerships to develop effective strategies to prevent heart attacks and stroke.

Find out more about the campaign at http://millionhearts.hhs.gov/index.html
Deadly diseases

The burden of disease continues to grow as the global population lives longer. Here, International Innovation illustrates the relationship between old age and disease prevalence worldwide and, more specifically, across North America.

WORLDWIDE, NONCOMMUNICABLE DISEASES (NCDS), OFTEN KNOWN AS CHRONIC DISEASES, KILL OVER 36 MILLION PEOPLE ANNUALLY.

- CARDIOVASCULAR DISEASE CAUSES 17.3 MILLION DEATHS
- CANCERS ARE RESPONSIBLE FOR 7.6 MILLION DEATHS
- RESPIRATORY DISEASES LEAD TO 4.2 MILLION DEATHS
- DIABETES ACCOUNTS FOR 1.3 MILLION DEATHS

CARDIOVASCULAR DISEASE

Of the 83.5 million American adults who suffer from at least one type of cardiovascular disease (CVD), 42.2 million are over the age of 60.

About 66% of CVD deaths in America occur in people 75 years or older.

Over 6% of the Canadian population over 65 lives with atrial fibrillation.

21% of American men and 10.6% of American women aged between 60 and 79 suffer from Coronary Heart Disease (CHD).

Of the approximate 4.7 million Americans ever diagnosed with emphysema, 92% are 45 or older.

**DIABETES**
- Approximately 10% of US inhabitants have diabetes, including over 25% of the elderly population.
- In 2009-10, 21.3% of Canadians aged 70 to 74 had diabetes.
- Roughly 2.5 million Canadians were diagnosed with diabetes in 2010.
- The healthcare cost of diabetes to the US economy is US $245 billion per year.

**ALZHEIMER’S DISEASE**
- Alzheimer’s disease (AD) is the 6th leading cause of death in the US.
- Roughly 5 million Americans aged 65 or older are living with AD in the US.
- 1 in 20 Canadians over the age of 65 and 1 in 4 over the age of 85 are affected by AD.
- In 2013, AD cost the US economy US $203 billion – this expenditure is expected to rise by 2050 to US $1.2 trillion.

**CANCER**
- It has been estimated that by 2030 there will be nearly 22.2 million new cases of cancer diagnosed worldwide every year.
- Almost 2/3 of deaths from breast cancer occur among women aged 65 years or older.
- Mammography screening conducted every 2 years for women between the ages of 65 and 74 has been proven to reduce deaths.
- Chronic bronchitis affects 64.2 out of 1,000 people over the age of 65 in America.

**RESPIRATORY DISORDERS**
- In 2011, nearly 12.7 million American adults were diagnosed with chronic obstructive pulmonary disease (COPD).
- Of the approximate 4.7 million Americans ever diagnosed with emphysema, 92% are 45 or older.